REMARKS

Claims 55, 56, 58 and 59 are pending in the present application. Claim 55 has been currently amended. No new matter has been introduced.

Referring to the Office Action, claims 55, 56, 58, and 59 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action states that it is unclear what the "reverse complement" is referring to, and that the term "is a double negative, and the reverse of the complement is actually nucleotides 15-1698 of SEQ ID NO: 1, and NOT an antisense of this region of the sequence." Applicants have addressed the indefiniteness issue by canceling "reverse" from the claim language. Accordingly, Applicants request that the rejection be withdrawn.

Referring to the Office Action, claims 55, 56, 58 and 59 stand rejected under 35 U.S.C. 112, first paragraph. The Office Action states that the specification is enabling "for the in vivo inhibition of human osteonectin of SEQ ID NO: 1 comprising the administration of transfected IIB-MEL-LES melanoma cells previously transfected in vitro with a nucleic acid sequence that expresses the complement of nucleotides 15-1698 of SEQ ID NO: 1, whereby tumor growth of the administered and previously transfected cells is inhibited, but alleges that the specification does not enable the invivo targeting and inhibition of expression of human osteonectin of SEQ ID NO: 1 comprising the administration of antisense, or further whereby treatment effects are provided in an

animal." The Office Action cites a number of articles detailing the difficulties associated with the design and use of antisense therapies. The rejection is hereby traversed and reconsideration is respectfully requested.

The claims are drawn to methods of treating a melanoma tumour in a human comprising subcutaneously administering to cells of the tumour an antisense nucleic acid comprising a sequence representing the complement of nucleotides 15-1698 of SEQ ID NO: 1.

Applicants respectfully submit that the difficulties identified in the cited articles have already been overcome by the present invention. The specification provides a working in vivo model system that demonstrates the efficacy of the present claimed invention. The specification further provides ample direction and guidance as to determining whether an antisense nucleic acid molecule reduces or eliminates osteonectin expression in cells (e.g., Example 1 and Figure 1), and that the reduction or elimination of the osteonectin expression correlates with reduced tumorigenicity (e.g., bridging paragraph of pages 18 and 19).

The Office Action states that the examples in the specification corresponding to in vitro transfection and the subsequent injection of transfected cells into mice is not correlative of the successful in vivo delivery, targeting and inhibition of human osteonectin SEQ ID No: 1 in an animal. The Federal Circuit has stated that "[w]hile every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to

enable members of the public to understand and carry out the invention." Genentech, Inc. v. Novo Nordisk, A/S, 42 USPQ2d 1001, 1005 (Fed. Cir. 1997).

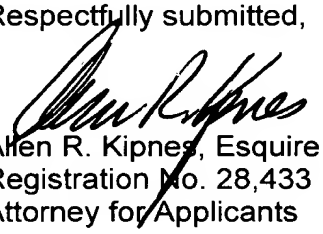
Applicants respectfully submit that ample guidance and direction is provided in the specification especially with regard to the in vivo delivery, targeting and subsequent inhibition of human osteonectin SEQ ID NO: 1 in an animal. In particular, the specification provides reasonable details on suitable delivery and targeting systems for the claimed antisense nucleic acid molecules including the use of vectors such as, for example, plasmids and viral vectors. Such viral vectors are described to include recombinant viral vectors based on retroviruses, adenoviruses, herpesviruses, and others capable of encoding a nucleic acid sequence for use in direct injection of solid tumours, in ex-vivo transfection of cells, or other known methods of administering and delivering vectors encoding antisense nucleic acid molecules to target cells (e.g., pages 6-9, Examples 1 and 2).

The specification provides detailed description on the use of antisense nucleic acid molecules to human osteonectin with known techniques described in WO 96/26267. The specification further teaches that the antisense nucleic acid molecules to human osteonectin are readily adaptable to the construction of a genetically disabled herpesviral vector encoding antisense oligodeoxynucleotide to human osteonectin using the techniques detailed on pages 28-29 of WO 96/26267. Further references in the specification are made to several known techniques for using and implementing antisense nucleic acid molecules. (See page 14 of the specification). Given the teachings of the specification, it would be a matter of routine experimentation to

determine accessible target sites, modes of delivery, and formulations necessary for the practice of the claimed invention.

In view of the foregoing, Applicants respectfully submit that the present invention is in condition for allowance and early passage to issue is therefore deemed proper and respectfully requested. It is believed that no additional fees are due. However, if any additional fee is due, it should be charged to Deposit Account No. 23-0510.

Respectfully submitted,



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